Voices from the Gas Fields

For residents of a western valley, methane gas development has meant uncertainly, doubt, and dragging fear

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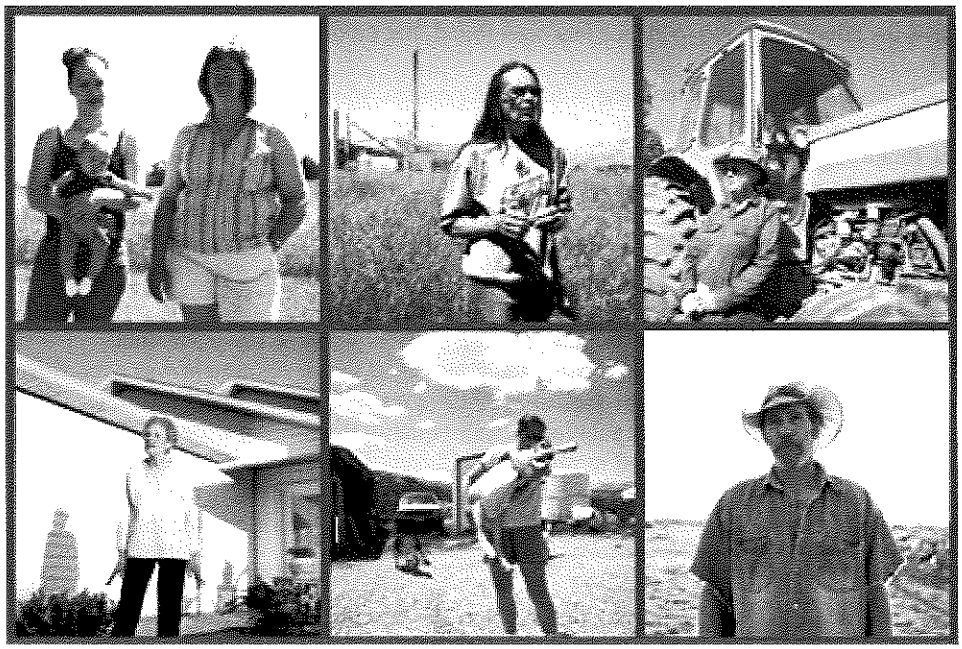

WHEN THE LIGHT OF EARLY morning shines on the red-ribboned mesas of western Colorado's Garfield County, and the Colorado River shimmers like a silver snake on the move, it's easy to see why the rural people who live here say they cling to this place. Then the light catches one of the hundreds of gas wells newly set upon the land, intimating a more complex story.

Deep underneath the county's dry sagebrush plateaus and irrigated farmland—and 250 miles north of Aztec, New Mexico—lies the Piceance (pronounced pee-awnce) Basin, home to an estimated 40 trillion cubic feet or more of recoverable natural gas, sandwiched between layers of sandstone and coal. Running beneath a quarter of the county's 1.9 million acres, the basin rolls west off the Rocky Mountains down to the desert country of northwestern Colorado. One of America's richest sources of natural gas, the Piceance holds enough gas to power the nation at current consumption rates for around two years. As the price of methane —a primary component of natural gas— has quadrupled in recent years, energy companies have sprinted here to drill rock and capture gas.

There are more than 3,200 gas wells in Garfield County, most drilled in the last five years; in the next eight condensate tanks, sumps, and wells carve brown scars into the green sloping hillsides. Straight, three- hundred-foot-wide swaths cleared of juniper and aspen trees indicate where underground pipelines carry gas as far as California. Garfield County officials don't even know how many miles of new roads and gas pipeline exist in the area, so quickly have they been laid.

Garfield County is a microcosm of a natural gas boom exploding throughout the country. The Bush administration says that finding energy at home is critical to reducing foreign imports and ensuring national security; last year, state and federal agencies throughout the country issued 36,827 gas well drilling permits, a 78 percent increase from 2002. To date, drilling companies have leased 36 million acres of federal public land, encompassing 88 percent of known natural gas reserves.

The sort of industrial energy development now evident along the Colorado River isn't, however, limited to public land. Although people here may own the fee title to land where they build their homes, if a drilling company owns or leases the gas down below, it can build a road and a well pad—generally covering around five acres altogether— on that private property in order to extract the gas. Across the West, this version of property rights has come as a gut-wrenching surprise to uncounted numbers of Americans. Literally uncounted; no tallies appear to exist

concerning how many people have had their lives disrupted in this manner.

After a well is drilled, an oil service company may inject—under great pressure—water, sand, and a mixture of chemicals that include carcinogens such as benzene, arsenic, and lead into the well. This "hydraulic fracturing," or "frac'ing," cracks the rock in which the gas is trapped in small pockets, and allows the gas to flow toward the well and to the surface. Up to 30 percent of fracturing fluids remain underground, according to studies conducted by the Environmental Protection Agency and by the oil and gas industry. How much "30 percent" is remains a mystery, as does the injection fluid's exact recipe—all that information is proprietary to the gas companies. These residual toxic fluids may then seep into the surrounding soil, groundwater, and water wells. Industry spokespeople consistently say there's no proof such pollution has ever occurred, an assertion based on the fact that no state oil and gas commission has ever found a definitive example of frac'ing impacting public health—but then, none of these state agencies nor the EPA has ever directly studied the connection. No evidence has been found, but no one has looked.

After gas companies hydraulically fracture a well, the methane is full of impurities, so well operators vent and burn the initial stream of gas before sending it through pipelines to market. This practice, called flaring, releases as many as 250 hazardous air pollutants, including carcinogens such as naphthalene and benzene, into the ambient air, according to a 1996 study by Environment Canada, a federal agency. In the last decade, neither the Canadian nor American government has further studied the implications of this practice. Moreover, neither the U.S. Centers for Disease Control and Prevention nor the EPA is conducting any long- term studies on how gas development might pollute water and air or cause disease.

A group of eighteen public health experts from universities around the United States wrote to Environmental Protection Agency and Interior Department officials in 2004, warning that increased gas development was occurring without adequate regard for human health. Despite such concerns, in 2005 Congress passed the Energy Policy Act, which exempts hydraulic fracturing from complying with regulation or water quality monitoring under the Safe Drinking Water Act, the principal tool EPA would have used to regulate it. Current EPA rules concerning flaring allow companies to release hazardous air pollutants like benzene into the air. As a result, a growing number of Garfield County residents, and people across the country, worry that their health is being sacrificed for the gas beneath them.

While photographer Christopher LaMarca and I were reporting this story, we visited one of the many well pads in Garfield County. Beside several silver wellheads were four tanks marked with warning labels reading: Danger! Extremely Flammable. Long term repeated exposure may cause cancer, blood, and nervous system damage. Contains benzene. Overexposure may cause eye, skin, or respiratory irritation or damage, and may cause headaches, dizziness, or other adverse nervous system effects or damage, including death.

Nearby, a string of orange and yellow flags roped off a forty-foot-wide sump filled with a brown sludge—discharged water and fracturing fluid pulled from the ground. There was no alarming noise or odor, just the thin air of midsummer and a dry, nagging dust. Within ten minutes, though, my head ached as if someone were pinching my temples between the jaws of a vise. The skin on my arms began to burn. LaMarca felt nauseous. We are lucky; we could leave and we did so—quickly. The people on these pages are not so fortunate; this increasingly poisonous place is their home.

DEB MEADER, 48, is a nurse, a mother of three girls, and a new grandmother. She lives in the town of Parachute, approximately two hundred yards from five gas wells.

"You can't live next to a gas well and not get sick. We look around on the mesa and everyone's got something. The guy below us had a real bad heart attack. The guy that owns the orchard has prostate cancer. I have headaches. Tom, my husband, has high blood pressure and gets headaches. Regina, my daughter, she had burning like you have a bladder infection. I did some research and found out that's a symptom of exposure to the chemicals in the air. My other neighbor, she's been sensitized to what's in the air because a gas well burped while she was irrigating. That's when gas builds up and they don't have the proper lids and filters on the top and it burps up and the gases come out. If she goes outside without a respirator on, she gets vomiting and diarrhea and her eyes will burn.

"Last summer, they were doing a lot of flaring up here, and my neighbor and I both woke up in the middle of the night, throwing up, with diarrhea and muscle pain. We called the sheriff's department and the EPA and then found out that there was a couple wells flared during the night. It's just a big revelation for me that it's okay to assault people and no one's held accountable for what they've done. We're not protected by the government or the law. This isn't the country that I thought I grew up in."

TINA ANTES, 43, lives in Silt, where she's resided most of her life and where she and her husband breed goats.

There are twelve gas wells within a quarter mile of their land.

"There's something in the air and it makes me sick. I can smell it instantly, and I know within four hours I will be fatigued and then you want to just sleep. I can't work and I get mad, because I have all these things to do. I never knew what a headache was before, but now nosebleeds are common, headaches definitely. But you can't really prove it's because of the gas unless you have thousands of dollars. "Two years ago, that smell, whatever it is, it was bad. It was so bad I couldn't even work outside. Two days after that day, one of our goats aborted three babies. This year we had two stillborns on the same day, from two different mamas. They looked perfect, like perfect little babies. It was the day after the gas was bad.

"You have to be careful what you say or they [the gas companies] can sue you for slander. You have to be very, very careful if you can't prove something; they are big money and we're just little guys."

ELIZABETH MOBALDI, 59, and her husband Steve, 53, lived in Rifle for almost ten years. They moved to the city of Grand Junction, sixty miles west, because a gas well near their home was making them sick. Elizabeth, a former physical therapist, is so ill she can't work. Steve is a construction worker. Elizabeth: "It was a beautiful life. We planned on staying in that house forever. We used to raise llamas, dogs, pigs, and chickens. The landscape was gorgeous, but it doesn't look that way anymore. They drilled one well two thousand feet away, at the end of our driveway." Steve: "Later that year, [she] started having headaches and rashes and it just got worse and worse. She was on twelve medications and nothing was helping. I used to have rectal bleeding, bloody noses, sinus infections, and headaches."

Elizabeth: "I got big bumps on my elbows, like tumors. There were knots all over my hands, and I started burning inside and out. I couldn't walk, the bottoms on my feet would burn so bad. I had big blisters inside my mouth. I lost over fifty-three pounds. I ended up with a precancerous tumor on my cervix and another tumor that was pressing on my optic nerve. The neurons in my spine are going in different directions and I started talking with a foreign accent. I had no idea at all what was going on; I find out now it's because I drank the water."

Steve: "The Barrett [Resources Corporation] employees told us our water was okay to drink, but you'd fill up a glass of water at night and put it by the bed, and in the morning it would have like an oil glaze on the top. You'd turn on the faucet sometimes and it was fizzing like soda water. I always thought the gas company knew what they were doing. I figured that the government and all those agencies were out there protecting people."

Elizabeth: "I'm mad as hell. I can't believe I'm stuck in this nightmare. Now they're going to put wells all around here."

Steve: "I think we'll leave Colorado. I don't know where we're going but we've started eliminating places where there's gas."

RICK ROLES, 49, lives in Silt. When he feels well he works construction and takes care of his ranch. There are nineteen wells within a quarter mile of his home.

"My dad and his brother bought the place in 1956. I moved up here twenty years ago. I worked on a drilling rig for the oil and gas industry back in the '70s and '80s over in Utah, Wyoming, and parts of Colorado, long enough to know what's going on around here.

"In these pits they're evaporating the water [produced while drilling] but the chemicals that are in the water, the benzene and the hydrocarbons, they don't evaporate, they settle to the ground or travel with the wind and that's got to be hurting somebody.

"I started getting sick two summers ago. I'd never gotten sick like this before. If I'm outside for any length of time and I exert myself very far, I start to feel sick. My hands swell up as big as softballs. My symptoms are from my hair to my toenails. In October, my arms were swelled up so bad I couldn't reach my face even to eat. I could hardly walk. It was hard to drive because I didn't have any rotation in my shoulders or wrists. When it gets to the point where I can't reach my face, I have to stop working.

"I had a bunch of blood tests done and they come back positive for toluene, benzene, and xylene. They're all the chemicals that are in the condensate tanks.
"I can't get the hell out right now. Not with all the livestock, and someone has to take care of the water. Besides, I won't sell this place. I don't want it on my conscience in case you or one of your grandchever wanted to live up here."

NANCY PITMAN, 58, a former high school English teacher, lives with her older sister Barbara on their 956- acre ranch. There are thirty-three wells on their land.

"I'm fourth generation here. The house is more than one hundred years old. They logged the logs for it up at the head of this creek. We've always run cattle. My parents are buried here; my sister's buried here; we intend to be buried here.

"This land is almost like a religion. It definitely is a part of me. I feel that it's our responsibility to care for it, to nurture it, to live with it as well as on it. When you question my dedication, my protectiveness, my desire to see the natural part remain undisturbed—if you attack that it's just like someone attacking the basic tenets in any other religion. At times I think the gas companies do that.

"While they were drilling I would go down to irrigate and when I was within just a field or so of those tanks and the drilling operation and pit, I could maybe stay in the vicinity forty-five minutes, and then I would have to leave because my nose and eyes would burn, I'd tear up and whatnot. It was a very uncomfortable feeling. I'm sure it's impacting me in the long term. I guessI should be sometimes.

"The issue of moving somewhere else is pretty traumatic. Where would I go? There aren't many places left in the West that aren't impacted."

Linda Allen

LINDA ALLEN, 54, and her husband take "old abandoned houses and give them love." She's lived in Garfield County almost her entire life. Her Rulison home lies within several hundred yards of a gas well.

"This has got to be one of the prettiest places that was ever put on the face of the Earth. I get up at five every morning because I love seeing the sun hit that mountain. I have bears that come down in the yard, wild turkeys and coyotes and elk, deer and foxes. We don't have no pets; these are my pets.

"This one well up behind the house always has been nasty. My neighbor told me there was a green fog above our house, so we got a little more concerned. I could see a river of oil flowing off the well site across the ground and dumping into the irrigation ditch, which will eventually lead to the Colorado River. Two years later, my mother-in-law, who used to live across the street, starting going through bouts of every cancer. She had a mastectomy for breast cancer, the year after that she had surgery for colon cancer, the year after that they told us there was no hope and then she passed. Dad died two weeks later.

"We're such a little community, and I am being just overwhelmed with people telling me, "oh, I've got cancer, I've got cancer." I mean, it just seems to be running through. I'm very concerned because I don't know what it's doing to my grandkids. They range in age from nine to three.

"I feel like we've sacrificed a lot. We sacrificed our water and our air; actually, we sacrificed our lives."